

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: March 7, 2005, 21:32:16 ; Search time 43 Seconds  
(without alignments)  
631.913 Million cell updates/sec

Title: US-09-619-032A-4  
Perfect score: 1879  
Sequence: 1 LRALVFHGNLQYAEIPKSEI.....RRLDAPRAIYNDWRGNGEP 364

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued Patents AA: \*  
1: /cgn2\_6/ptodata/1/iaa/5A\_COMB.pep: \*  
2: /cgn2\_6/ptodata/1/iaa/5B\_COMB.pep: \*  
3: /cgn2\_6/ptodata/1/iaa/6A\_COMB.pep: \*  
4: /cgn2\_6/ptodata/1/iaa/6B\_COMB.pep: \*  
5: /cgn2\_6/ptodata/1/iaa/PCTUS\_COMB.pep: \*  
6: /cgn2\_6/ptodata/1/iaa/backfile1.pep: \*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1879	100.0	364	4	US-10-166-606-4 Sequence 4, Appli
2	1589	84.6	346	2	US-08-613-220B-4 Sequence 4, Appli
3	140.5	7.5	647	1	US-07-894-212A-8 Sequence 8, Appli
4	140.5	7.5	649	1	US-07-894-212A-2 Sequence 2, Appli
5	140.5	7.5	650	1	US-07-893-928A-1 Sequence 1, Appli
6	105	5.6	227	4	US-09-107-532A-5554 Sequence 5554, Ap
7	101.5	5.4	360	4	US-09-710-279-2150 Sequence 2150, Ap
8	101.5	5.4	376	4	US-09-710-279-2106 Sequence 2106, Ap
9	101	5.4	329	1	US-08-270-013B-2 Sequence 2, Appli
10	101	5.4	329	1	US-08-838-418-2 Sequence 2, Appli
11	97	5.2	653	4	US-09-540-236-3128 Sequence 3128, Ap
12	94.5	5.0	367	3	US-09-134-001C-3678 Sequence 3678, Ap
13	92	4.9	375	4	US-09-710-279-1840 Sequence 1840, Ap
14	92	4.9	845	4	US-09-248-796A-15394 Sequence 15394, A
15	91.5	4.9	741	4	US-09-252-991A-31448 Sequence 31448, A
16	91.5	4.9	1009	4	US-09-693-146-4 Sequence 4, Appli
17	91	4.8	1031	4	US-09-543-681A-8245 Sequence 8245, Ap
18	90.5	4.8	406	3	US-09-134-001C-3570 Sequence 3570, Ap
19	90.5	4.8	789	4	US-09-248-796A-19294 Sequence 19294, A
20	90.5	4.8	1171	4	US-09-248-796A-16043 Sequence 16043, A
21	90	4.8	3854	4	US-09-949-016-7876 Sequence 7876, Ap
22	89.5	4.8	322	4	US-09-489-039A-12383 Sequence 12383, A
23	89	4.7	857	4	US-09-248-796A-20522 Sequence 20522, A
24	88.5	4.7	399	4	US-09-252-991A-23741 Sequence 23741, A
25	88.5	4.7	764	3	US-09-235-451-36 Sequence 36, Appli
26	88.5	4.7	764	4	US-09-978-303-36 Sequence 36, Appli
27	88.5	4.7	993	4	US-09-894-998A-50 Sequence 50, Appli

28	88.5	4.7	993	4	US-10-237-551-50	Sequence 50, Appli
29	88.5	4.7	1037	4	US-09-894-998A-54	Sequence 54, Appli
30	88.5	4.7	1037	4	US-10-237-551-54	Sequence 54, Appli
31	88.5	4.7	1113	4	US-09-894-998A-51	Sequence 51, Appli
32	88.5	4.7	1113	4	US-10-237-551-51	Sequence 51, Appli
33	88.5	4.7	1114	4	US-10-237-551-202	Sequence 202, Appli
34	88.5	4.7	2089	1	US-08-418-893D-23	Sequence 23, Appli
35	88.5	4.7	2089	1	US-08-418-893D-24	Sequence 24, Appli
36	88	4.7	329	4	US-09-710-279-1460	Sequence 1460, Ap
37	88	4.7	339	4	US-09-328-352-4144	Sequence 4144, Ap
38	88	4.7	339	4	US-09-489-039A-11436	Sequence 11436, A
39	88	4.7	420	4	US-09-248-796A-23483	Sequence 23483, A
40	88	4.7	1151	4	US-09-710-279-2448	Sequence 2448, Ap
41	88	4.7	1154	3	US-09-134-001C-3428	Sequence 3428, Ap
42	87.5	4.7	542	4	US-09-949-016-6778	Sequence 6778, Ap
43	87.5	4.7	554	4	US-09-949-016-11687	Sequence 11687, A
44	87.5	4.7	689	1	US-08-248-021A-2	Sequence 2, Appli
45	87	4.6	235	2	US-09-141-135-2	Sequence 2, Appli

ALIGNMENTS

RESULT 1									
US-10-166-606-4									
; Sequence 4, Application US/10166606									
; Patent No. 664756									
; GENERAL INFORMATION:									
; APPLICANT: Murphy, Dennis									
; TITLE OF INVENTION: ALPHA GALACTOSIDASES AND METHODS FOR									
; FILE REFERENCE: 09010-004005									
; CURRENT APPLICATION NUMBER: US/10/166, 606									
; CURRENT FILING DATE: 2003-01-31									
; PRIOR APPLICATION NUMBER: US 09/407, 806									
; PRIOR FILING DATE: 1999-09-28									
; PRIOR APPLICATION NUMBER: US 08/613, 220									
; PRIOR FILING DATE: 1996-03-08									
; NUMBER OF SEQ ID NOS: 4									
; SOFTWARE: FastSeq for Windows Version 4.0									
; SEQ ID NO 4									
; LENGTH: 364									
; TYPE: PRT									
; ORGANISM: Thermococcus alcaliphilus									
US-10-166-606-4									
Query Match 100.0%; Score 1879; DB 4; Length 364;									
Best Local Similarity 100.0%; Pred. No. 5.2e-191;									
Matches 364; Conservative 0; Mismatches 0; Indels 0; Gaps 0;									
QY	1	LRALVFHGNLQYAEIPKSEIPEKAYIPVIEITLIKEIIPFGLNITGYTLKFLPKDIID	60						
DB	1	LRALVFHGNLQYAEIPKSEIPEKAYIPVIEITLIKEIIPFGLNITGYTLKFLPKDIID	60						
QY	61	LVKGIASDLIEIIGTSYTHAILPLPLSRVEAQVQDRVEKELFEVSPKGFWLPETAY	120						
DB	61	LVKGIASDLIEIIGTSYTHAILPLPLSRVEAQVQDRVEKELFEVSPKGFWLPETAY	120						
QY	121	DPRIIPALIKDNGEYELFADGEAMLFSALHNSAIKPIKPLYPHLIKAQREKFRYISYLLG	180						
DB	121	DPRIIPALIKDNGEYELFADGEAMLFSALHNSAIKPIKPLYPHLIKAQREKFRYISYLLG	180						
QY	181	LRELKAIKLVFEGKVTLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD	240						
DB	181	LRELKAIKLVFEGKVTLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD	240						
QY	241	NILLYGTDFIEFGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP	300						
DB	241	NILLYGTDFIEFGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP	300						
QY	301	DKSLRIWREDEGNARLMLSYNMRGELAFLAENSADARGWBPPLPERLDAPRAIYNDWRGE	360						

Db 301 DKSRLRWEDEGNARLNLMSYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
QY 361 NGEP 364  
Db 361 NGEP 364

RESULT 2

US-08-613-220B-4  
; Sequence 4, Application US/08613220B  
; Patent No. 5958751  
; GENERAL INFORMATION:  
; APPLICANT: Murphy, Dennis  
; APPLICANT: Reid, John  
; TITLE OF INVENTION: ALPHA-GALACTOSIDASE  
; NUMBER OF SEQUENCES: 4  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Fish & Richardson, P.C.  
; STREET: 4225 Executive Square, Suite 1400  
; CITY: La Jolla  
; STATE: CA  
; COUNTRY: US  
; ZIP: 92037  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: Windows95  
; SOFTWARE: FastSeq for Windows Version 2.0  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/613,220B  
; FILING DATE: 08-MAR-1996  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER:  
; FILING DATE:  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Haile, Ph.D., Lisa A.  
; REGISTRATION NUMBER: 38,347  
; REFERENCE/DOCKET NUMBER: 09010/004001  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 619-678-5070  
; TELEFAX: 619-68-5099  
; TELEX:  
; INFORMATION FOR SEQ ID NO: 4:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 346 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
; US-08-613-220B-4

Query Match 84.6%; Score 1589; DB 2; Length 346;  
Best Local Similarity 95.1%; Pred. No. 3.3e-160;  
Matches 346; Conservative 0; Mismatches 0; Indels 18; Gaps 18;

QY 1 LRALVFHGNLQYAEIPKSEIPKVIKAYIPVETLIKKEIPFGLNITGYTLKFLPKDIID 60  
Db 1 LRALVFHGNLQYAEIPKSEIPKVIKAYIPVETLIKKEIPFGLNITGYTLKFLPKDIID 57  
QY 61 LVKGGIASDLIEIIGTSYTHAIIPLPLSRVEAQVORDREVEKEELFEVSPKGFWLPFLAY 120  
Db 58 LVKGGIASDLIEIIGTSYTHAIIPLPLSRVEAQVORDR-VKEELFEVSPKGFWLPFLA- 114  
QY 121 DPLIPAILKONGYEVYLFADGEAMLFSAHLSAIIKPIKPLYPHLIKAQREKFRYISYLLG 180  
Db 115 DPLIPAILKONGYEVYLFAD-EAMLFSAHLSAIIKPIKPL-PHLIKAQREKFRYISYLL- 171  
QY 181 LRELKRAIKLVFEKVTLKAVKDIEAVPVWAVNTAVMLGIGRLPLMNPKKVASWIEDKD 240  
Db 172 LRELKRAIKLVFEKVTLK-VKDIEAVPVWAVNTAVML-IGRLPLMNPKKVASWIEDK- 228  
QY 241 NILLYGTIDIBFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELTLRTSSWAP 300

Db 229 NILLYGTIDIBFIGYRDIAG-RMSVEGLLEVIDELNSELCLPSELKHSGRELTLRTSSWA- 285  
QY 301 DKSRLRWEDEGNARLNLMSYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
Db 286 DKSRLRWEDEGNARLNLMSYMRGELAFLAENSDARGW-PLPERRLDAFRAIYNDWRG- 342

QY 361 NGEP 364  
Db 343 NGEP 346

RESULT 3

US-07-894-212A-8  
; Sequence 8, Application US/07894212A  
; Patent No. 5366883  
; GENERAL INFORMATION:  
; APPLICANT: ASADA, KIYOZO  
; APPLICANT: UEMORI, TAKASHI  
; APPLICANT: MUKAI, HIROYUKI  
; APPLICANT: KATO, IKUNOSHIN  
; APPLICANT: LADERMAN, KENNETH  
; APPLICANT: ANFINSEN, CHRISTIAN  
; TITLE OF INVENTION: THE ALPHA-AMYLASE GENE  
; NUMBER OF SEQUENCES: 8  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: CUSHMAN DARBY & CUSHMAN  
; STREET: 1100 NEW YORK AVENUE, N.W.  
; CITY: WASHINGTON, D.C.  
; COUNTRY: U.S.A.  
; ZIP: 20005  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/07/894,212A  
; FILING DATE:  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: KOKULIS, PAUL N.  
; REGISTRATION NUMBER: 16773  
; REFERENCE/DOCKET NUMBER: 95469/C-1195  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (202) 861-3000  
; TELEFAX: (202) 822-0944  
; TELEX: 6714627 CUSH  
; INFORMATION FOR SEQ ID NO: 8:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 647 amino acids  
; TYPE3: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; US-07-894-212A-8

Query Match 7.5%; Score 140.5; DB 1; Length 647;  
Best Local Similarity 22.8%; Pred. No. 9.3e-06;  
Matches 89; Conservative 60; Mismatches 127; Indels 115; Gaps 23;

QY 25 EKAYIPVETLIKKEIP--FGLNITGYTLKFLP--KDIIDLKGGIASDLIEIIGTSY 78  
Db 27 EKCYPPELET--EYPMKVAIHTSGPLIEWLQDNRPETIDLLRSLVKRGQVEIVAGF 84  
QY 79 THAIIPLPLSRVEAQVORDREVE--ELFEVSPKGFWLPFLAYDPLIPAILKONGYEVY 136  
Db 85 YEPVLASIP--KEDRIEQIRLMKEWAKSIGFDARGVWLTERRVQPELVKTLKESGIDYV 141  
QY 137 FADGEAMLFSAHLSAIIKPIKPLY-PHLIKAQRE-----KFRYISYLLGLRELKRA 187  
Db 142 IVD-----DYHMSAGLSKEELTYPTYTEDGGEVIAVFPIDELR---YLIPFRPVDKV 192

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QY      188 IKL-----VFEQKVTLKAV--KDIEAVPVWVAVNTAVMLGIGRLPLMNPKKVASWT----- 236
      193 LEYIHLIDGDESKVAVFHDDGEKFGIWPGETYEWVY-----EKGWLRFFFD 239
QY      237 ---EDKDNILLYGTDIE----FIGYRDIAGRMSVEGLLEVIDELNSELCP----- 281
      240 ISSDEKINMLYTEYLEKYPKPRGLVYLPISY-----FEM-----SEWSLPAQARLF 287
QY      282 ----SELKHSG----RELYLRTSSWAPDKSLRIWREDEGN---ARLNMLSYNNRGELAF 330
      288 VEFVNELKVKIGIFEKYRVFVRGGIW---KNF-FYKYPESNMYMKRMLMVSCLVRNN----- 339
QY      331 AENS DARGWEPLPERRLDAFRAIYND--WRG 359
      340 -----PEARKYLLRAQCNDAYWHG 358
Db

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## RESULT 4

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US-07-894-212A-2
; Sequence 2, Application US/07894212A
; Patent No. 5366883
; GENERAL INFORMATION:
; APPLICANT: ASADA, KIYOZO
; APPLICANT: UEMORI, TAKASHI
; APPLICANT: MUKAI, HIROYUKI
; APPLICANT: KATO, IKUNOSHIN
; APPLICANT: LADERMAN, KENNETH
; APPLICANT: ANFINSEN, CHRISTIAN
; TITLE OF INVENTION: THE ALPHA-AMYLASE GENE
; NUMBER OF SEQUENCES: 8
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: CUSHMAN DAREY & CUSHMAN
; STREET: 1100 NEW YORK AVENUE, N.W.
; CITY: WASHINGTON, D.C.
; COUNTRY: U.S.A.
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/894,212A
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: KOKULIS, PAUL N.
; REGISTRATION NUMBER: 16773
; REFERENCE/DOCKET NUMBER: 95469/C-1195
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 861-3000
; TELEFAX: (202) 822-0944
; TELEX: 6714627 CUSH
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 649 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-07-894-212A-2

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	Query Match	7.5%;	Score 140.5;	DB 1;	Length 649;	
	Best Local Similarity	22.8%;	Pred. No. 9.4e-06;			
	Matches	89;	Conservative	60;	Mismatches 127;	Indels 115; Gaps 23;
QY	25 EKAYIPVIELIKEIP---	FGLNITGYTLKFLP---	KDIDLVKGIASDLIEIGTSY	78		
		:::::	::: ::: :::	:		
Dd	29 EKCYPFLETL--EETPRNKVAIHTSGPLIEMLQDNRPPEYIDLLRSLVKRGQVEIVAGF			86		
QY	79 THAILPLPLSRVEAQVDREYKE--ELFEVSPKGFMLBELAYDPPIIPAILKONGERYL			136		
	: :::	::: ::: :::	: ::: ::: :::	:		
Dd	87 YEPVLASIP--KEDRIEQIRIMKEWAKSIGFDARGVWLTERVWOPELVKTLKESGIDIV			143		

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QY      137 FADGEAMLPSAHLNSAIKPIKPLY-PHLIKAQRE-----KRFRYISYLLGURELRKA 187
Db      144 IVD-----DYHMSAGLSKEELYMPYTTEDGGEVIAVFPIDEKLR--YLIFRRPVDKV 194
QY      188 IKL---VEEGKVTLKAV--KDIEAVPVVAVNTAVMLGIGRLPLMPKVASWI----- 236
Db      195 LEYLSLIDGDESKVAVFHDDGEKFGIMPGETYEWVY-----EKGMLREFFDR 241
QY      237 ---EDKNILLYGTDIE---FIGYRDIAGYRMSVEGLLEVIDELNSLCLP----- 281
Db      242 ISSDEKINMLLYTEYLEKYPKPRGLVYLPISY-----FEM-----SEWSLPAQARLF 289
QY      282 ----SELKHSG---RELYLRTSSWAPDKSLRIMREDEGN---ARLNLMLSYNNGELAF 330
Db      290 VEFVNELKVKGIPEKYRVFVRRGIW--KNF-PYKYPESNNYMHKRLMNVSKLVNN----- 341
QY      331 AENS DARGWEPLPERRLDAFRAIYND--WRG 359
Db      342 -----PEAR KYLLRAQCNDAYWHG 360

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## RESULT 5

```

US-07-893-928A-1
: Sequence 1, Application US/07893928A
: Patent No. 5578479
:
: GENERAL INFORMATION:
:
: APPLICANT: LADERMAN, KENNETH
: APPLICANT: ANFINSEN, CHRISTIAN
: TITLE OF INVENTION: a-AMYLASE FROM HYPERTHERMOPHILIC
: TITLE OF INVENTION: ARCHAEABACTERIUM
: NUMBER OF SEQUENCES: 3
:
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: CUSHMAN DARBY & CUSHMAN
: STREET: 1100 NEW YORK AVENUE, N.W.
: CITY: WASHINGTON, D.C.
: COUNTRY: U.S.A.
: ZIP: 20005
:
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Tape
:
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: PatentIn Release #1.0, Version #1.25
:
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/07/893,928A
: FILING DATE:
:
: CLASSIFICATION: 435
:
: ATTORNEY/AGENT INFORMATION:
: NAME: KOKULIS, PAUL N.
: REGISTRATION NUMBER: 16773
: REFERENCE/DOCKET NUMBER: 95470/C-1197
:
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: (202) 861-3000
: TELEFAX: (202) 822-0944
: TELEX: 6714627 CUSH
:
: INFORMATION FOR SEQ ID NO: 1:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 650 amino acids
: TYPE: amino acid
: STRANDEDNESS: single
: TOPOLOGY: linear
: MOLECULE TYPE: protein
:
US-07-893-928A-1

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	Query Match	7.5%;	Score 140.5;	DB 1,	Length 650;
	Best Local Similarity	22.8%;	Pred. No. 9.4e-06;		
	Matches	89;	Conservative	60;	Mismatches 127; Indels 115; Gaps 23;
Oy	25 EKAYIPVIETLIKEIP---FGLNITGYTLKFLP---KDII DLVKGGIASDLIRIGTSY	78			
	:       : :   :     :   :				
Dd	29 EKCYPFLETL--EYFNMKVAIH TSGPLIEWLDNRPEYIDLRLSLVKRGQVEIVAGF	86			
Oy	79 THAILPLPLSRVEAQVORDREKE--ELFEVS PKGFWLP ELAYDPII PAILKONGYEYL	136			

Db 87 YEPVLASIP---KEDRIEQRILMKEMAKSIGFDARGVWLTERWQDELVTLKESGIDYV 143  
QY 137 FADGEAMLFSAHLSAIPKIPPLY-PHLIKAQRE-----KRPRIISYLLGLRELKRA 187  
Db 144 IVD-----DYHMSAGLSKEELYPYTTEDGGEVIAVFPIDEKLR---YLIPRPVDKV 194  
QY 188 IKL---VEEGVTLKAV--KDIEAVPVWAVNTAVMLGIGRLPLMPKVASWI----- 236  
Db 195 LEYLHSLIDGESKVAVFHDDGEKGIWPGTYEWWY-----EKGWLEFFDR 241  
QY 237 ---EDKNILLYGTDIE-----FIGYRDIAGYRMSVEGLLEVIDELNSELCLP----- 281  
Db 242 ISSDEKINIMLYTEYLEKKPRGLVYLPISY-----FEM-----SEWSLPKQARLF 289  
QY 282 ---SELKHSQ---RELYLRTSSWAPDKSLRIWREDEGN---ARLNMLSYMRGELAF 330  
Db 290 VEFVNELKVKGIFEKYRVFVRGIV---KNF-FYKYPESNYMHKRMVSKLVRRN----- 341  
QY 331 AENS DARGWEPLPERLDAFRATYND--WRG 359  
Db 342 -----PEARKYLLRAQCNDAYWHG 360

RESULT 6

US-09-107-532A-5554  
; Sequence 5554, Application US/09107532A  
; Patent No. 6583275

GENERAL INFORMATION:

; APPLICANT: Lynn A Doucette-Stamm and David Bush  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO  
; ENTEROCOCCUS FAECIUM FOR DIAGNOSTICS AND THERAPEUTICS  
; NUMBER OF SEQUENCES: 7310  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: GENOME THERAPEUTICS CORPORATION  
; STREET: 100 Beaver Street  
; CITY: Waltham  
; STATE: Massachusetts  
; COUNTRY: USA  
; ZIP: 02354

COMPUTER READABLE FORM:

; MEDIUM TYPE: CD-ROM ISO9660  
; COMPUTER: PC  
; OPERATING SYSTEM: <Unknown>  
; SOFTWARE: ASCII

CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/107,532A  
; FILING DATE: 30-Jun-1998

PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 60/085,598  
; FILING DATE: 14 May 1998  
; APPLICATION NUMBER: 60/051571  
; FILING DATE: July 2, 1997

ATTORNEY/AGENT INFORMATION:

; NAME: Ariniello, Pamela Deneke  
; REGISTRATION NUMBER: 40,489  
; REFERENCE/DOCKET NUMBER: GTC-012  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (781)893-5007  
; TELEFAX: (781)893-8277

INFORMATION FOR SEQ ID NO: 5554:

SEQUENCE CHARACTERISTICS:

; LENGTH: 227 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; HYPOTHETICAL: YES

; ORIGINAL SOURCE:  
; ORGANISM: Enterococcus faecium

FEATURE:

; NAME/KEY: misc\_feature

; LOCATION: (B) LOCATION 1..227

; SEQUENCE DESCRIPTION: SEQ ID NO: 5554:

US-09-107-532A-5554  
Query Match 5.6%; Score 105; DB 4; Length 227;  
Best Local Similarity 24.2%; Pred. No. 0.01;  
Matches 60; Conservative 34; Mismatches 88; Indels 66; Gaps 12;  
QY 140 GEAMLSAHLNSAIPKIPPLYPHLIKAQREKFRYISYLLGLRELK-----AI 188  
Db 3 GEKMFISITMKLV-----FGLIGLLVVRLLGKKSMSSEITPFDLVY 43  
QY 189 KLVFEGKVTLLKAVKD-----IEAVPVWAVNTAVML-GIGRLPLMPKVASWIEDKD 240  
Db 44 TLVLGGLIEESTYDDNVHGVHFLAIALW-----AVMIYGERIVQKN-EKVRWVKGE 97  
QY 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSE-----LKHSGRELYLR 294  
Db 98 SVLTKD---GVINMTELTTNHIEMEQLRAI---LRQCECFLENKAVHILENAGQMSVLK 151  
QY 295 TSSWAPDKSLRIWREDEGNARLNMLSYMRGELAFLAENS DARGWEPLPERLDAFRATY 354  
Db 152 KSD--EDKALSTLLVDEGQIQHKVLSQNLTE-AWLMENTLKEGY-----ADVKKQLY 201  
QY 355 NDWRGENG 362  
Db 202 VEWSEK 209

RESULT 7

US-09-710-279-2150  
; Sequence 2150, Application US/09710279  
; Patent No. 6703492

GENERAL INFORMATION:

; APPLICANT: KIMBERLY, WILLIAM JOHN  
; TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS  
; FILE REFERENCE: P03480US  
; CURRENT APPLICATION NUMBER: US/09/710,279  
; CURRENT FILING DATE: 2000-11-09  
; PRIOR APPLICATION NUMBER: 60/164,258  
; PRIOR FILING DATE: 1999-11-09  
; NUMBER OF SEQ ID NOS: 4472  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 2150  
; LENGTH: 360  
; TYPE: JRT  
; ORGANISM: Artificial Sequence

FEATURE3:

; OTHER INFORMATION: Description of Artificial Sequence: synthetic  
; OTHER INFORMATION: amino acid sequence

US-09-710-279-2150

Query Match 5.4%; Score 101.5; DB 4; Length 360;  
Best Local Similarity 19.1%; Pred. No. 0.051;  
Matches 57; Conservative 52; Mismatches 117; Indels 73; Gaps 12;

QY 4 LVFHGNLQYAIRPKSEIPKVIKAYIPVETLIKKEIPFGNLTGYTLKFLPKDIIIDLYK 63  
Db 61 LIFKG-----VKRIVEDGYGSIIRKLIQNNI--NLIALHTNLDVNPKGVRMLA 107  
QY 64 GGIASDLIEIIGT--SYTHALPLPLPSRVEAQVQRDREYKVELFEVSPKGFWLPDELAYD 121  
Db ..08 DQIGLENISMINTNSSYVYKQTFIPKNYIE-----DFKDSINEL----- 147  
QY ..22 PIIPALIKDNGYEYLFADGEAMLFSAHLSAIPKIPPLYPHLIKAQREKFRYISYLLGL 181  
Db ..48 ----GLAKEGNVEYCFESEG-----KGQFKPVGDASPYIGKLD-----IEYV--- 187  
QY 182 RELKRAIKLVF-----EGKVTLLKAVKDIE--AVPV--WVAVNTAVMLGIGRLPLMPK 232  
Db 188 ---DEIKLEFMIKDNELEITKRAILLDNHPYETPVDFIKANKSEYGLGIIGQLNQTM 243  
QY 233 ASWIEDKNILLYGTDIEFIGYRDIAGYRMSVEGLLEV-----IDELNSELCLPSELKH 286  
Db 244 LDEFSEYAKQLNIPSVRYTGQDSDSPIKKVAITGGSGIGFEYKASQLGADVFTGDIKH 302



## RESULT 8

US-09-710-279-2106

; Sequence 2106, Application US/09710279

; Patent No. 6703492

; GENERAL INFORMATION:

; APPLICANT: KIMMERLY, WILLIAM JOHN

; TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS

; FILE REFERENCE: PU3480US

; CURRENT APPLICATION NUMBER: US/09/710,279

; CURRENT FILING DATE: 2000-11-09

; PRIOR APPLICATION NUMBER: 60/164,258

; PRIOR FILING DATE: 1999-11-09

; NUMBER OF SEQ ID NOS: 4472

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 2106

; LENGTH: 376

; TYPE: PRT

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Description of Artificial Sequence: synthetic

; US-09-710-279-2106

## Query Match

5.4%; Score 101.5; DB 4; Length 376;

Best Local Similarity 19.1%; Pred. No. 0.054;

Matches 57; Conservative 52; Mismatches 117; Indels 73; Gaps 12;

```
QY 4 LVEHGNLQYAEIPKSEIPRYIEKAYIPVETLIKEIPFGNITGYTLKFLPKDIDLVK 63
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 47 LIFKG-----VKRIVEDGYGSIIRKLIGNNI--NLIALHTNLDVNPKGVMMLA 93
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 64 GGIASDLIEIGT--SYTHAILPLPLSRVEAQVQRDRVEKELFEVSPKGFMLPELAYD 121
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 94 DQIGLENISMINTNSSIYKVTQTFIPKNYIE-----DFKDSLNL----- 133
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 122 PIIPAILKDNQVEYLPADGEAMLFSALNSAIKPIKPLYPHLIKAQREKFRYISYLLGL 181
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 134 ---GLAKEGNYEYCFESEG-----KGQFKPVGDPSPYIGKIDS-----IEYV--- 173
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 182 RELRKAIKLVF----EGKVTLKAVKDIE--AVPV--WVAVNTAVMLGIGRLPLNPKV 232
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 174 ---DEIKLEFMIKDNELEITKRAILDNHPYETPVDFIKNKESEYGLIGQLNQMT 229
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 233 ASWIEDKDNILYGTIDIEFIGYRDIAGRMSVEGLLEV-----IDELNSELCLPSELKH 286
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 230 LDEFSEYAKKQLNIPSVRYTGQHDSPIKKVAIIIGSGIGFEYKASQLGADVFTVDIKH 288
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
```

## RESULT 9

US-08-270-013B-2

; Sequence 2, Application US/08270013B

; Patent No. 5686294

; GENERAL INFORMATION:

; APPLICANT: Sogabe et al.

; TITLE OF INVENTION: PROTEIN HAVING HEAT-RESISTANT MALATE

; TITLE OF INVENTION: DEHYDROGENASE ACTIVITY

; NUMBER OF SEQUENCES: 2

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Leydig, Volt &amp; Mayer, Ltd.

; STREET: Two Prudential Plaza, Suite 4900

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 61601-6780

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/270,013B

; FILING DATE: 01-JUL-1994

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: JP 164701/1993

; FILING DATE: 02-JUL-1993

; ATTORNEY/AGENT INFORMATION:

; NAME: Green, Robert F.

; REGISTRATION NUMBER: 27555

; REFERENCE/DOCKET NUMBER: 62321

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (312) 616-5600

; TELEFAX: (312) 616-5700

; TELEX: (25)3533

; INFORMATION FOR SEQ ID NO: 2:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 329 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; US-08-270-013B-2

## Query Match

5.4%; Score 101; DB 1; Length 329;

Best Local Similarity 25.3%; Pred. No. 0.05;

Matches 39; Conservative 25; Mismatches 50; Indels 40; Gaps 7;

```
QY 10 LQYAEIPKSEIPK-----VIEKAYIPVETLIKEIPFGNITGYTLKFLPKDIDL 61
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 130 MITYVKEKESGPKNRVIGSGVLDTR---FRTFAEE-----VKDVTGF 175
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 62 VKGIASDLIEIGTSYTHAI--LPLPLSRVEAQVQRDRVEKELFEVSPKG--FWLPE 117
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 176 VLGGHDDMVPLVRSYAGGIPLEKLIIPKRLDAIVERTRKGGGEIVNLGNGSAYABA 235
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 118 LAVDPIIPAILKDN-----GYEYLF 137
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 236 ASLVMEVAILKDQRIIPALVAYLEGEYEGYIY 269
    |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
```

## RESULT 10

US-08-838-418-2

; Sequence 2, Application US/08838418

; Patent No. 5744342

; GENERAL INFORMATION:

; APPLICANT: Sogabe et al.

; TITLE OF INVENTION: PROTEIN HAVING HEAT-RESISTANT MALATE

; TITLE OF INVENTION: DEHYDROGENASE ACTIVITY

; NUMBER OF SEQUENCES: 2

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Leydig, Volt &amp; Mayer, Ltd.

; STREET: Two Prudential Plaza, Suite 4900

; CITY: Chicago

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60601-6780

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/838,418

; FILING DATE: 17-MAR-1997

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/270,013

; FILING DATE: 01-JUL-1994

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: JP 164701/1993

; FILING DATE: 02-JUL-1993

; ATTORNEY/AGENT INFORMATION:

; NAME: Hoover, Allen E.

; REGISTRATION NUMBER: 37354

```

; ; REFERENCE/DOCKET NUMBER: 78339
; ; TELECOMMUNICATION INFORMATION:
; ; TELEPHONE: (312) 616-5600
; ; TELEFAX: (312) 616-5700
; ; TELEX: (25)3533
; ; INFORMATION FOR SEQ ID NO: 2:
; ; SEQUENCE CHARACTERISTICS:
; ; LENGTH: 329 amino acids
; ; TYPE: amino acid
; ; TOPOLOGY: linear
; ; MOLECULE TYPE: protein
; ;
US-08-838-418-2

```

Query Match	5.4%;	Score 101;	DB 1;	Length 329;
Best Local Similarity	25.3%;	Pred. No. 0.05;		
Matches 39;	Conservative 25;	Mismatches 50;	Indels 40;	Gaps 7;

```
OY      10 LQYAEIPKSEI PK-----VIEKAYIVPIETLLIKEI PFGLNITGYTLKFPLPKDIIDL 61
          :|::||           ||:||||
Db     130 MITYTVFKESGFPRKNRVIGSGSVLDTAR---FRITVAEE----LNIS-----VKDVTGTF 175
```

```

QY      62 VKGSIADLIEIIGTSYTHAI--LPLELSRVEAQVORDREKKEELFEVSPKG--FWLPE 117
      |||:::|||||:::|||||:::|||||:::|||||:::|||||
Db     176 VLGGHDDMVPVLRYSYAGGIPLEKLIPKDRLDIVERTRKGGGEIVNLLNGSAYTAPA 235

```

```

Qy      118 LAYDPTIPAILKDN-----GYEYLF 137
          :  :: |||||
Db      236 ASLVEMVEALIKDQRILPALAYLEGEYGEIY 269

```

RESULT 11  
US-09-540-236-3128  
; Sequence 3128, Application US/09540236

; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA CATAR  
 ; TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS

```

; CURRENT APPLICATION NUMBER: US/09/540,236
; CURRENT FILING DATE: 2000-04-04
; NUMBER OF SEQ ID NOS: 3840

```

```

; TYPE: PRT
; ORGANISM: M.cattarrhalis
US-09-540-236-3128

```

Query Match	5.2%;	Score 97;	DB 4;	Length 653;
Best Local Similarity	21.9%;	Pred. No. 0.4;		
Matches 72;	Conservative 43;	Mismatches 128;	Indels 86;	Gaps 13;

```
QY      22 KVEKAYIPVIEITLKEEIPFGLNITGYTLKFLP-----KDIDLVKGGIAS--- 68
       ||| | | : | | | | |
Db      95 KRIEPAYRGVITD--REGAPLANA NPLVTVFDPYAYAEEYYRLDNEIKTTKSETAKQA 15
```

```
QY      69 -----DLIEIGTSTYTHAILPLPLSRVEAQVORD-----REVKEELEFVSPPKGF 113
          ||::| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db     153 LKKLEMDLVRL-----AAAANYPLEKLEAAVGIDHTLDTSNSQVKKEAL-----PKGA 201
```

QY 114 WLPELA-YDPIIPAILKONGEYELFADGEAMLPSAHLNSAIKPICKPLYPHLTAKAQREKR 172  
| : : | : : : : : : : : : :  
Db 202 SSRRLVLLNRVSPVAKSVTDLGLFAIGREQYFQRYYLQA-EPNAQLGYMAQSDETQG 260

QY 173 RYISYLLGLRELRAIKLVFEFGKVTLKAVKDIEAVPVWVAVNTAVMIGIRGLPLMNPKKV 232

Db 261 GYIG-----RAGIEAKYNERLAGDGK-----VQILRGTRQPIQIEIQI 300

QY 233 ASWIEDKONILLYGTDIEFICYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELY 292  
 || :: | : :: : || : |  
 Db 301 EPLIEGENIRLTIDSRLLQVLYKE-----LEQVGRLLQ-----SARSSSGMIVD 343

QY 293 LRT-----SSWAPDKSLR1WREDEGNAR 315

```

Db      344 VKTGEVLAMGSWPSFNSNNLSERDGANER 372
          ::|  ||  |  |  |

```

RESULT 12  
US-09-134-001C-3678  
; Sequence 3678, Application US/09134001C

APPLICANT: Lynn Doucette-Stamm et al  
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS  
TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS

; CURRENT APPLICATION NUMBER: US/09/134,001C  
 ; CURRENT FILING DATE: 1998-08-13  
 ; PRIOR APPLICATION NUMBER: US 60/064,964

; PRIOR APPLICATION NUMBER: US 60/055,779  
 ; PRIOR FILING DATE: 1997-08-14  
 ; NUMBER OF SEQ ID NOS: 5674

```

; TYPE: PRT
; ORGANISM: Staphylococcus epidermidis
US-09-134-001C-3678

```

Query Match	5.0%;	Score 94.5;	DB 3;	Length 367;
Best Local Similarity	18.7%;	Pred. No. 0.29;		
Matches	56;	Conservative	52;	Mismatches 118;
			Indels	73;
			Gaps	12;

```

Oy      4 LVFHGNLQYAEIPKSEIPKVEKAVIPVETLIKBEIPFGLNITGYTLKFLPKDIIIDLVK 63
        |::|      :::|      :|::|      |::|      :::
Db      68 LIFKG-----VKRIVEDGSGSIIRKLIQNNI--NLIALHTNLDVNDPKGVNRMMLA 114

```

```

Oy      64 GGIASDLIEIGT--SYTHAIPPLPLSRVEAQVQDRREVKEELFEVSPKGFMLPELAYD 121
          |  :  |  |  |  :  :  :  :  :  :  :  :  :  :  :  :  :  :
Db      115 DQIGLENISMINTNSSYYKQGFIPKNYIE-----DFKDSLNEL----- 154

```

```

QY      122 PIPAILKONGYEYLFADGEAMLFSAHLNSAIKPIKPLYPHLIKAQREKRFYISYLLGL 181
          : | : | | | : : | : : | : :
Db      155 ----GLAKEGNYEYCFESEG-----KGQFGPVGDASPYIGKLD-----IEYV--- 194

```

```

OY      182 RELRAIKLVF-----EGKVTLKAVKDIE--AVPV--WVAVNTAVMLGIRGLPLNNPKKY 232
      ||| | : : : : || : : : :
DB      195 ----DEIKLEFMIKDNELEITKKAILLDNHPYETPVFDFIKNNKESSEYGLGIQQLNQMT 250

```

```

OY      233 ASWIEDKONILLYGTDIEFIGRYDIAGRMSVEGLLEV-----IDELNSELCLPSELKH 286
          :      :      :      :      :      :      :      :      :      :
DB      251 LDEFSEYAKQOLNIPSVRYTGQHDSPKIKVAIIGSGIGFEYKASQLGADVFTYGDIKH 309

```

RESULT 13  
US-09-710-279-1840  
; Sequence 1840, Application US/09710279

```

; APPLICANT: KIMMERLY, WILLIAM JOHN
;
; TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS
;
; FILE REFERENCE: PU3480US

```

```

; CURRENT FILING DATE: 2000-11-09
; PRIOR APPLICATION NUMBER: 60/164,258
; PRIOR FILING DATE: 1999-11-09

```

```

; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO: 1840
; LENGTH: 375

```

; ORGANISM: Artificial Sequence

**FEATURE:**

```

OTHER INFORMATION: Description of Artificial Sequence: synthetic
OTHER INFORMATION: amino acid sequence
OTHER INFORMATION:

```

US-09-710-279-1840

Query Match 4.9%; Score 92; DB 4; Length 375;  
Best Local Similarity 19.3%; Pred. No. 0.55;  
Matches 72; Conservative 55; Mismatches 109; Indels 138; Gaps 16;  
QY 59 IDLVKGSIASDLIEIGTSYTHAIIPLPLSRV---EAQVRDREVKELFEVSPK--- 111  
DB 3 IDIESG---DFAIFGTSGSGKTTALRMINRMIESTEGEITIDGNIKELNPVELRSI 58  
QY 112 GFWLPBLAYDP-----IIPALK-----DNGYEL----- 136  
DB 59 GYVIOQIGLMPHMTVKENTVLVFKLLKMSQEKDEKAKELRLVDLPBEYLD RYPSLSG 118  
QY 137 -----FADGEAMLSAHLNSAIKPI-KPLYPHLIK---AQREKFRYISYLLGL 181  
DB 119 GQQQRIGVNRALAEODIILMDEPFGALDPITRDTLQDLVKKLQQQLGKTFIFVTH--- 174  
QY 182 RELRKAIKL-----VFEKVTLKAVKD 203  
DB 175 -DMDEAIKLADKICIMTNGQVIQYDTPDNILRSPANDFVRDFIGQNRLIQDRPNIRTVKD 233  
QY 204 IEAVPVWAVNTAVMLGIGRLPLMPKVASWIEDKNILLYGTDIEFIGYRDIAGYRMS 263  
DB 234 AMIKPVTVHVRSLNDVAV---IMREKRV-----DTIFVGNDEHLGLYDIEDINEG 283  
QY 264 VEGLEVIDELNSELCL--LPSELKHSGRELYLRTSSWAP-----DKSL----- 304  
DB 284 LRHKELIDTMRDIYRVRIDSKLQDSVRTILKRNVRNVVVDSDNKTLLGLVTRANLVD 343  
QY 305 ----RIMRE-DEGN 313  
DB 344 IVYDSIWGELESN 357

RESULT 14  
US-09-248-796A-15394  
; Sequence 15394, Application US/09248796A  
; Patent No. 6747137  
; GENERAL INFORMATION:  
; APPLICANT: Keith Weinstock et al  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO CANDIDA ALBICAN  
; FILE REFERENCE: 107196.132  
; CURRENT APPLICATION NUMBER: US/09/248,796A  
; PRIOR FILING DATE: 1999-02-12  
; PRIOR APPLICATION NUMBER: US 60/074,725  
; PRIOR FILING DATE: 1998-02-13  
; PRIOR APPLICATION NUMBER: US 60/096,409  
; PRIOR FILING DATE: 1998-08-13  
; NUMBER OF SEQ ID NOS: 28208  
; SEQ ID NO 15394  
; LENGTH: 845  
; TYPE: PRT  
; ORGANISM: Candida albicans  
US-09-248-796A-15394

Query Match 4.9%; Score 92; DB 4; Length 845;  
Best Local Similarity 20.2%; Pred. No. 2.1;  
Matches 78; Conservative 64; Mismatches 117; Indels 128; Gaps 21;  
QY 38 BEIP-FGLNITGYTLKFLPKDIIIDLVKGSIASDLIEII-----GTSYTHAI 82  
DB 202 DEMPHIGYDING-----KRIMPAKGSALDQLESIDLPEGWTGLDQNTGTS----- 249  
QY 83 LPLPLSRVDAQVORDREVKELFE-VSPKGFWLPELAYDPIIPALIKONGYEXYLFADGE 141  
DB 250 ---LKLTDDELELIRKIQOQENTDENINP-----YEPLIDWFTKD----- 286  
QY 142 AMLFSAHLNSAIKPIKPLYPHLIKAQREKFRYISYLLGLRELKRAIKLVFEKGV----- 196  
DB 287 -----EEIMP-----VTAVPEPKRRFVPSKHEAKRVMKIVKAIAREGRITIPNK 329  
QY 197 -----TLKAVKDIEAVPVW---VAVNTAVM-LGIGRLP-----LMNPCKVA 233

DB 330 VQQQLTEEEEDQFNFDLWQDEIEISDHIMNLRAPKLPPPTNEESYNPPEEYLLTTEEKS 389  
QY 234 SWIE---DKDNILLYGTDIEFIGYRDIAGYRMSVEGLEVIDELNSELCLPSELKHSGR 289  
DB 390 KWLQESPIDREBNFL---PQKNSLRQVPGYQDSVRERF-----ERSLDLYLAPVRHN-- 440  
QY 290 ELYLRTSSWAPD---KSLR-----IWRDEGNARLNMLSYMRGELAFLAENS-- 335  
DB 441 KLNIDPDSLIPDLSPKDLRFPFIRCSTIYEGHTG--KIRTISIDPG--LWLATGSDG 496  
QY 336 -ARGWEPLPERRLDAFRAIYNDRGEN 361  
DB 497 SVRIWEILTGROVYKIQLINKEINNED 523

RESULT 15  
US-09-252-991A-31448  
; Sequence 31448, Application US/09252991A  
; Patent No. 6551795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; FILE REFERENCE: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; CURRENT FILING DATE: 1999-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,788  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142  
; SEQ ID NO 31448  
; LENGTH: 741  
; TYPE: PRT  
; ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-31448

Query Match 4.9%; Score 91.5; DB 4; Length 741;  
Best Local Similarity 19.5%; Pred. No. 1.9;  
Matches 84; Conservative 63; Mismatches 131; Indels 153; Gaps 22;  
QY 34 TLIKEIIPGLNITGYTLKFLPKDIIIDLVKGSIASDLIEIGTSYTHAI-----LPLLP 87  
DB 257 TWMKISHPI--VFGHAVSVYKDVFD--KWG--QIFEEELGVNPNNGISSVYDKIKSLP 308  
QY 88 LSRVEAQVORDREVKELFEV-----SPKG---FWLP-ELAYDPIIPALIKDNG 132  
DB 309 ASQGE-----ELHDHEVYSHRPEMAMVDSVKGITNLHIIPSDVIDASMPAMIRNSG 361  
QY 133 YEYLFADG-----EAMLSAHLNSAIKPIKPLYPHLIKAQREKFRY 174  
DB 362 -QMWGKDQKQDTKAVMPESTYARIYQEMINFCKTNGAFDPTTMGSVPNVGLMAQAEY 420  
QY 175 ISYLLGLRELKRAIKLVFEKVTLKAV-----KDIEAVPVWAVNTA-----VM 218  
DB 421 GSH-----DKTFEWTADG--TMRVVLADGSVLMQHDVETGDIWRACQTKDAPLRDVK 471  
QY 219 LGIGR-----LPLMP-----KKVASWIEDKNILLYGTDIEFIGYRDIAGYR 261  
DB 472 LAVTRARQSDTPAIFWLDPERAHDRELKRVLYLKDHD--LTGLDISIMGYNE--AIR 526  
QY 262 MSVEGLEVIDELN-----SEL-----CL 280  
DB 527 VSMERLIRGKDTISYTGNVLRDYLTLDFPIMELGTSAKMLSIPLMAGGMYETGAGGSA 586  
QY 281 PSELKHSGRELYLRTSSWAPDKSLRIWRD-----EGNARLNMLSYMRGELAFLAENS 336  
DB 587 PKHVQQLVEENYLRWDSLGEFLALAVSLSEETGIGTGNAAKAKLIGKALDEATGKLDNNKS 646  
QY 337 RGWEPLPERRL 347  
DB 647 -----PSRKV 651

Search completed: March 7, 2005, 21:45:20  
Job time : 45 secs

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GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: March 7, 2005, 21:42:11 ; Search time 132 Seconds  
(without alignments)  
907.366 Million cell updates/sec

Title: US-09-619-032A-4  
Perfect score: 1879  
Sequence: 1 LRALVFHGNLQYAEIPKSEI.....RRLDAFRAIYNDWRGENGEP 364

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 1391452 seqs, 329044822 residues

Total number of hits satisfying chosen parameters: 1391452

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Published Applications AA:\*

1: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep:\*  
2: /cgn2\_6/ptodata/1/pubpaa/PCT\_NEW\_PUB.pep:\*  
3: /cgn2\_6/ptodata/1/pubpaa/US06\_NEW\_PUB.pep:\*  
4: /cgn2\_6/ptodata/1/pubpaa/US06\_PUBCOMB.pep:\*  
5: /cgn2\_6/ptodata/1/pubpaa/US07\_NEW\_PUB.pep:\*  
6: /cgn2\_6/ptodata/1/pubpaa/PCTUS\_PUBCOMB.pep:\*  
7: /cgn2\_6/ptodata/1/pubpaa/US08\_NEW\_PUB.pep:\*  
8: /cgn2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep:\*  
9: /cgn2\_6/ptodata/1/pubpaa/US09A\_PUBCOMB.pep:\*  
10: /cgn2\_6/ptodata/1/pubpaa/US09B\_PUBCOMB.pep:\*  
11: /cgn2\_6/ptodata/1/pubpaa/US09C\_PUBCOMB.pep:\*  
12: /cgn2\_6/ptodata/1/pubpaa/US09\_NEW\_PUB.pep:\*  
13: /cgn2\_6/ptodata/1/pubpaa/US10A\_PUBCOMB.pep:\*  
14: /cgn2\_6/ptodata/1/pubpaa/US10B\_PUBCOMB.pep:\*  
15: /cgn2\_6/ptodata/1/pubpaa/US10C\_PUBCOMB.pep:\*  
16: /cgn2\_6/ptodata/1/pubpaa/US10D\_PUBCOMB.pep:\*  
17: /cgn2\_6/ptodata/1/pubpaa/US10\_NEW\_PUB.pep:\*  
18: /cgn2\_6/ptodata/1/pubpaa/US11\_NEW\_PUB.pep:\*  
19: /cgn2\_6/ptodata/1/pubpaa/US60\_NEW\_PUB.pep:\*  
20: /cgn2\_6/ptodata/1/pubpaa/US60\_PUBCOMB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1870	99.5	364	9 US-09-886-400-4	Sequence 4, Appli
2	1870	99.5	364	13 US-10-112-357-4	Sequence 4, Appli
3	1870	99.5	364	13 US-10-114-403-4	Sequence 4, Appli
4	1870	99.5	364	13 US-10-116-606-4	Sequence 4, Appli
5	1870	99.5	364	13 US-10-112-331-4	Sequence 4, Appli
6	1870	99.5	364	13 US-10-112-377-4	Sequence 4, Appli
7	1870	99.5	364	13 US-10-116-581-4	Sequence 4, Appli
8	1870	99.5	364	13 US-10-112-442-4	Sequence 4, Appli
9	1870	99.5	364	13 US-10-112-418-4	Sequence 4, Appli
10	1870	99.5	364	13 US-10-114-083-4	Sequence 4, Appli
11	111.5	5.9	890	15 US-10-282-122A-53281	Sequence 53281, A
12	109	5.8	312	15 US-10-369-493-23237	Sequence 23237, A
13	105.5	5.6	573	15 US-10-424-599-175517	Sequence 175517, A

14	105.5	5.6	730	15 US-10-425-114-55544	Sequence 55544, A
15	103	5.5	1073	9 US-09-815-242-12361	Sequence 12361, A
16	103	5.5	1147	9 US-09-815-242-5468	Sequence 5468, Ap
17	103	5.5	1150	15 US-10-122A-44391	Sequence 44391, A
18	102.5	5.5	478	15 US-10-369-493-4506	Sequence 4506, Ap
19	102.5	5.5	478	15 US-10-369-493-7264	Sequence 7264, Ap
20	101	5.4	441	16 US-10-437-963-122721	Sequence 122721,
21	100.5	5.3	314	15 US-10-369-493-17395	Sequence 17395, A
22	98.5	5.2	813	15 US-10-282-122A-47208	Sequence 47208, A
23	98	5.2	510	15 US-10-369-493-56	Sequence 56, Appl
24	97	5.2	652	15 US-10-282-122A-63055	Sequence 63055, A
25	97	5.2	1878	15 US-10-607-631-20	Sequence 20, Appl
26	96.5	5.1	798	15 US-10-425-114-37809	Sequence 37809, A
27	96.5	5.1	1085	15 US-10-282-122A-58833	Sequence 58833, A
28	96.5	5.1	3432	15 US-10-282-122A-69849	Sequence 69849, A
29	96	5.1	530	15 US-10-369-493-10268	Sequence 10268, A
30	96	5.1	530	15 US-10-282-122A-77165	Sequence 77165, A
31	96	5.1	698	16 US-10-437-963-122301	Sequence 122301,
32	95.5	5.1	875	15 US-10-282-122A-52807	Sequence 52807, A
33	95	5.1	535	15 US-10-282-122A-55460	Sequence 55460, A
34	95	5.1	2094	16 US-10-437-963-161607	Sequence 161607,
35	94.5	5.0	749	15 US-10-369-493-9015	Sequence 9015, Ap
36	94.5	5.0	1822	15 US-10-432-443-39	Sequence 39, Appl
37	94	5.0	274	15 US-10-282-122A-54582	Sequence 54582, A
38	94	5.0	664	14 US-10-032-585-7195	Sequence 7195, Ap
39	93.5	5.0	993	15 US-10-369-493-20014	Sequence 20014, A
40	93.5	5.0	1165	15 US-10-282-122A-71768	Sequence 71768, A
41	93.5	5.0	1320	14 US-10-161-051-167	Sequence 167, App
42	93.5	5.0	2049	16 US-10-437-963-197248	Sequence 197248,
43	93.5	5.0	2111	16 US-10-437-963-186073	Sequence 186073,
44	93.5	5.0	2498	16 US-10-437-963-186071	Sequence 186071,
45	93	4.9	235	17 US-10-495-918-152	Sequence 152, App

ALIGNMENTS

RESULT 1  
US-09-886-400-4  
; Sequence 4, Application US/09886400  
; Patent No. US20020045226A1  
; GENERAL INFORMATION:  
; APPLICANT: DIVERSA CORPORATION  
; APPLICANT: Murphy, Dennis  
; APPLICANT: Ried, John  
; TITLE OF INVENTION: ENZYMES HAVING ALPHA-GALACTOSIDASE ACTIVITY AND METHODS OF USE TH  
; FILE REFERENCE: DIVER1120-4  
; CURRENT APPLICATION NUMBER: US/09/886,400  
; CURRENT FILING DATE: 2001-06-20  
; PRIOR APPLICATION NUMBER: 09/619,032  
; PRIOR FILING DATE: 2000-07-19  
; PRIOR APPLICATION NUMBER: 09/407,806  
; PRIOR FILING DATE: 1999-09-20  
; PRIOR APPLICATION NUMBER: 08/613,220  
; PRIOR FILING DATE: 1996-03-08  
; NUMBER OF SEQ ID NOS: 4  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 4  
; LENGTH: 364  
; TYPE: PRT  
; ORGANISM: Thermococcus alcaliphilus  
US-09-886-400-4

Query Match 99.5%; Score 1870; DB 9; Length 364;  
Best Local Similarity 99.5%; Pred. No. 4.9e-165;  
Matches 362; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

OY 1 LRALVFHGNLQYAEIPKSEIPKVIKAYIPVIEITLIKESIPFGLNTGTTLKFLPKDIID 60  
Db 1 LRALVFHGNLQYAEIPKSEIPKVIKAYIPVIEITLIKESIPFGLNTGTTLKFLPKDIID 60  
OY 61 LVKGIASDLIEIGTSYTHAILPLPLSRVEAQVQDRVKEELFEVSPKFWLPDELAY 120

Db 61 LVKGGIASDLIEIIGTSYTHAILPLPLSRVEAQVORDREVKEELFELSPKGFWLPDELAY 120  
Qy 121 DPLIPAILKONGYEYLFADGEAMLSAHLNSAIKPIKPLYPHLIKAQREKFRFYISYLLG 180  
Db 121 DPLIPAILKONGYEYLFADGEAMLSAHLNSAIKPIKPLYPHLIKAQREKFRFYISYLLG 180  
Qy 181 LRELKRAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
Db 181 LRELKRAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
Qy 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
Db 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
Qy 301 DKSRLIWRDEGNARLNLSTYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
Db 301 DKSRLIWRDEGNARLNLSTYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
Qy 361 NGEF 364  
Db 361 NGEF 364

RESULT 2  
US-10-112-357-4  
; Sequence 4, Application US/10112357  
; Publication No. US20020115099A1  
; GENERAL INFORMATION:  
; APPLICANT: DIVERSA CORPORATION  
; APPLICANT: Murphy, Dennis  
; APPLICANT: Ried, John  
; TITLE OF INVENTION: ENZYMES HAVING ALPHA-GALACTOSIDASE ACTIVITY AND METHODS OF USE TH  
; FILE REFERENCE: DIVER1120-4  
; CURRENT APPLICATION NUMBER: US/10/112,357  
; PRIOR FILING DATE: 2002-03-29  
; PRIOR APPLICATION NUMBER: 09/886,400  
; PRIOR FILING DATE: 2001-06-20  
; PRIOR APPLICATION NUMBER: 09/619,032  
; PRIOR FILING DATE: 2000-07-19  
; PRIOR APPLICATION NUMBER: 09/407,806  
; PRIOR FILING DATE: 1999-09-20  
; PRIOR APPLICATION NUMBER: 08/613,220  
; PRIOR FILING DATE: 1996-03-08  
; NUMBER OF SEQ ID NOS: 4  
; SOFTWARE: FaastSeq for Windows Version 4.0  
; SEQ ID NO 4  
; LENGTH: 364  
; TYPE: PRT  
; ORGANISM: Thermococcus alcaliphilus  
US-10-112-357-4

Query Match 99.5%; Score 1870; DB 13; Length 364;  
Best Local Similarity 99.5%; Pred. No. 4.9e-165;  
Matches 362; Conservative 1; Mismatches 1; Indels 0; Gaps 0;  
Qy 1 LRALVFHGNLQYABIPKSEIPKVIKAYIPVETLIKEIIPGINTGYTLKFLPKDIID 60  
Db 1 LRALVFHGNLQYABIPKSEIPKVIKAYIPVETLIKEIIPGINTGYTLKFLPKDIID 60  
Qy 61 LVKGGIASDLIEIIGTSYTHAILPLPLSRVEAQVORDREVKEELFEVSPKGFWLPDELAY 120  
Db 61 LVKGGIASDLIEIIGTSYTHAILPLPLSRVEAQVORDREVKEELFEVSPKGFWLPDELAY 120  
Qy 121 DPLIPAILKONGYEYLFADGEAMLSAHLNSAIKPIKPLYPHLIKAQREKFRFYISYLLG 180  
Db 121 DPLIPAILKONGYEYLFADGEAMLSAHLNSAIKPIKPLYPHLIKAQREKFRFYISYLLG 180  
Qy 181 LRELKRAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
Db 181 LRELKRAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
Qy 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
Db 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300

Db 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
Qy 301 DKSRLIWRDEGNARLNLSTYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
Db 301 DKSRLIWRDEGNARLNLSTYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
Qy 361 NGEF 364  
Db 361 NGEF 364

RESULT 3  
US-10-114-403-4  
; Sequence 4, Application US/10114403  
; Publication No. US20020115100A1  
; GENERAL INFORMATION:  
; APPLICANT: DIVERSA CORPORATION  
; APPLICANT: Murphy, Dennis  
; APPLICANT: Ried, John  
; TITLE OF INVENTION: ENZYMES HAVING ALPHA-GALACTOSIDASE ACTIVITY AND  
; FILE REFERENCE: DIVER1120-4  
; CURRENT APPLICATION NUMBER: US/10/114,403  
; PRIOR FILING DATE: 2002-04-01  
; PRIOR APPLICATION NUMBER: 09/886,400  
; PRIOR FILING DATE: 2001-06-20  
; PRIOR APPLICATION NUMBER: 09/619,032  
; PRIOR FILING DATE: 2000-07-19  
; PRIOR APPLICATION NUMBER: 09/407,806  
; PRIOR FILING DATE: 1999-09-20  
; PRIOR APPLICATION NUMBER: 08/613,220  
; PRIOR FILING DATE: 1996-03-08  
; NUMBER OF SEQ ID NOS: 4  
; SOFTWARE: FaastSeq for Windows Version 4.0  
; SEQ ID NO 4  
; LENGTH: 364  
; TYPE: PRT  
; ORGANISM: Thermococcus alcaliphilus  
US-10-114-403-4

Query Match 99.5%; Score 1870; DB 13; Length 364;  
Best Local Similarity 99.5%; Pred. No. 4.9e-165;  
Matches 362; Conservative 1; Mismatches 1; Indels 0; Gaps 0;  
Qy 1 LRALVFHGNLQYABIPKSEIPKVIKAYIPVETLIKEIIPGINTGYTLKFLPKDIID 60  
Db 1 LRALVFHGNLQYABIPKSEIPKVIKAYIPVETLIKEIIPGINTGYTLKFLPKDIID 60  
Qy 61 LVKGGIASDLIEIIGTSYTHAILPLPLSRVEAQVORDREVKEELFEVSPKGFWLPDELAY 120  
Db 61 LVKGGIASDLIEIIGTSYTHAILPLPLSRVEAQVORDREVKEELFEVSPKGFWLPDELAY 120  
Qy 121 DPLIPAILKONGYEYLFADGEAMLSAHLNSAIKPIKPLYPHLIKAQREKFRFYISYLLG 180  
Db 121 DPLIPAILKONGYEYLFADGEAMLSAHLNSAIKPIKPLYPHLIKAQREKFRFYISYLLG 180  
Qy 181 LRELKRAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
Db 181 LRELKRAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
Qy 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
Db 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
Qy 301 DKSRLIWRDEGNARLNLSTYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
Db 301 DKSRLIWRDEGNARLNLSTYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
Qy 361 NGEF 364  
Db 361 NGEF 364

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RESULT 4
US-10-116-606-4
; Sequence 4, Application US/10116606
; Publication No. US20020119515A1
; GENERAL INFORMATION:
; APPLICANT: DIVERSA CORPORATION
; APPLICANT: Murphy, Dennis
; APPLICANT: Ried, John
; TITLE OF INVENTION: ENZYMES HAVING ALPHA-GALACTOSIDASE ACTIVITY AND METHODS OF USE THEREIN
; FILE REFERENCE: DIVER1120-4
; CURRENT APPLICATION NUMBER: US/10/116,606
; CURRENT FILING DATE: 2002-04-03
; PRIOR APPLICATION NUMBER: US/09/886,400
; PRIOR FILING DATE: 2001-06-20
; PRIOR APPLICATION NUMBER: 09/619,032
; PRIOR FILING DATE: 2000-07-19
; PRIOR APPLICATION NUMBER: 09/407,806
; PRIOR FILING DATE: 1999-09-20
; PRIOR APPLICATION NUMBER: 08/613,220
; PRIOR FILING DATE: 1996-03-08
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 364
; TYPE: PRT
; ORGANISM: Thermococcus alcaliphilus
US-10-116-606-4

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Query Match	99.5%	Score 1870;	DB 13;	Length 364;
Best Local Similarity	99.5%	Pred. No. 4.9e-165;		
Matches 362; Conservative	1;	Mismatches 1;	Indels 0;	Gaps 0;

QY	I	LRAVLFHGNLQYAIEIPKSEI	PKVIEKAYIPVIETLLIKEEIPFGLNITGYTLKELPKDIIID	60
Dd	1	LRALVFHGNLQYAIEIPKSEI	PKVIEKAYIPVIETLLIKEEIPFGLNITGYTLKELPKDIIID	60
QY	61	LVKGGIASDLIEIIGTSYTHAILPLPLPSRVEAQVORDREVKEELFEVS	PKGFWLPELAY	120
Dd	61	LVKGGIASDLIEIIGTSYTHAILPLPLPSRVEAQVORDREVKEELFELS	PKGFWLPELAY	120
QY	121	DPPIPALIKDNGYEYLFPADGEAMLFSAHLSAIIKPILPYPHLIKAQREKRFRYSYLLG	180	
Dd	121	DPPIPALIKDNGYEYLFPADGEAMLFSAHLSAIIKPILPYPHLIKAQREKRFRYSYLLG	180	
QY	181	LRELRAIKLVFECKVTLLKAVKDI EAVPVVA VNTAVMLGIGRLPLMNP	PKVASWIEDKO	240
Dd	181	LRELRAIKLVFECKVTLLKAVKDI EAVPVVA VNTAVMLGIGRLPLMNP	PKVASWIEDKO	240
QY	241	NILLYGTDIEFIGRDIAGYRMSVEGLLEVIDELNSELCLPSELXHSGRELYLRTSSWAP	300	
Dd	241	NILLYGTDIEFIGRDIAGYRMSVEGLLEVIDELNSELCLPSELXHSGRELYLRTSSWAP	300	
QY	301	DKSLRIWREDEGNARLNLSTYNMRGELLFLAENSDARGWEPLPERRLDAFRAIYNDWRGE	360	
Dd	301	DKSLRIWREDEGNARLNLSTYNMRGELLFLAENSDARGWEPLPERRLDAFRAIYNDWRGE	360	
QY	361	NGEP	364	
Dd	361	NGEP	364	

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RESULT 5
US-10-112-331-4
; Sequence 4, Application US/10112331
; Publication No. US20020119550A1
; GENERAL INFORMATION:
; APPLICANT: DIVERSA CORPORATION
; APPLICANT: Murphy, Dennis
; APPLICANT: Ried, John
; TITLE OF INVENTION: ENZYMES HAVING ALPHA-GALACTOSIDASE ACTIVITY AND METHODS OF USE THEREIN
; FILE REFERENCE: DIVER1120-4
; CURRENT APPLICATION NUMBER: US/10/112,331
; CURRENT FILING DATE: 2002-03-29

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; PRIOR APPLICATION NUMBER: US/09/886,400
; PRIOR FILING DATE: 2001-06-20
; PRIOR APPLICATION NUMBER: 09/619,032
; PRIOR FILING DATE: 2000-07-19
; PRIOR APPLICATION NUMBER: 09/407,806
; PRIOR FILING DATE: 1999-09-20
; PRIOR APPLICATION NUMBER: 08/613,220
; PRIOR FILING DATE: 1996-03-08
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 364
; TYPE: PRT
; ORGANISM: Thermococcus alcaliphilus
US-10-112-331-4

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Query Match	99.5%;	Score 1870;	DB 13;	Length 364;
Best Local Similarity	99.5%;	Pred. No. 4.9e-165;		
Matches 362; Conservative	1;	Mismatches 1;	Indels 0;	Gaps 0;

QY 1 LRALVFHGNLQYAEIPKSEIPKVIYEKAYIPVIETLKEEIPFGNLTGTYLLKFLPKDIID 60

DB 1 LRALVFHGNLQYAEIPKSEIPKVIYEKAYIPVIETLKEEIPFGNLTGTYLLKFLPKDIID 60

QY 61 LVKGGIASDLIEIIGTSYTHALLPLPLSRVEAQVQDRREVKEELFEVSPKGFMLPELAY 120

DB 61 LVKGGIASDLIEIIGTSYTHALLPLPLSRVEAQVQDRREVKEELFEVSPKGFMLPELAY 120

QY	121	DPITPAILKNGYEYL	FADGEAML	FSAHLSA	IKPIKPL	PHLIKAREK	FRYISYLLG	180
Db	121	DPITPAILKNGYEYL	FADGEAML	FSAHLSA	IKPIKPL	PHLIKAREK	FRYISYLLG	180

Oy	181	LRELRAIKLVFEGKVTLKAVKDIEAVPVWVAVNTAVMLGIRLPLMNPKYASWIEDKD	240
Db	181	LRELRAIKLVFEGKVTLKAVKDIEAVPVWVAVNTAVMLGIRLPLMNPKYASWIEDKD	240

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OY      241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCPLSELKHSGRELYLRTSSWAP 300
        |||||
DB       241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCPLSELKHSGRELYLRTSSWAP 300
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<b>QY</b>	301	DKSLRIRWEDEGNARLNLSTNNRGELAF	LAENSDARGWEPLPERLDAFRAI	YNDWRGE	360
<b>Db</b>	301	DKSLRIRWEDEGNARLNLSTNNRGELALLAENS	DARGWEPLPERLDAFRAI	YNDWRGE	360

QY	361	NGEP	364
Db	361	NGEP	364

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RESULT 6
US-10-112-377-4
; Sequence 4, Application US/10112377
; Publication No. US20020120108A1
; GENERAL INFORMATION:
; APPLICANT: DIVERSA CORPORATION
; APPLICANT: Murphy, Dennis
; APPLICANT: Ried, John
; TITLE OF INVENTION: ENZYMES HAVING ALPHA-GALACTOSIDASE ACTIVITY AND METHODS OF USE TH
; FILE REFERENCE: DIVER1120-4
; CURRENT APPLICATION NUMBER: US/10/112,377
; PRIOR FILING DATE: 2002-03-29
; PRIOR APPLICATION NUMBER: 09/886,400
; PRIOR FILING DATE: 2001-06-20
; PRIOR APPLICATION NUMBER: 09/619,032
; PRIOR FILING DATE: 2000-07-19
; PRIOR APPLICATION NUMBER: 09/407,806
; PRIOR FILING DATE: 1999-09-20
; PRIOR APPLICATION NUMBER: 08/613,220
; PRIOR FILING DATE: 1996-03-08
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 364

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QY 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
DB 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
QY 301 DKSLRIMREDEGNARLNLNLSYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
DB 301 DKSLRIMREDEGNARLNLNLSYMRGELALLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
QY 361 NGEF 364  
DB 361 NGEF 364

RESULT 9  
US-10-112-418-4  
; Sequence 4, Application US/10112418  
; Publication No. US20020155486A1  
; GENERAL INFORMATION:  
; APPLICANT: DIVERSA CORPORATION  
; APPLICANT: Murphy, Dennis  
; APPLICANT: Ried, John  
; TITLE OF INVENTION: ENZYMES HAVING ALPHA-GALACTOSIDASE ACTIVITY AND  
; FILE REFERENCE: DIVER1120-4  
; CURRENT APPLICATION NUMBER: US/10/112,418  
; PRIOR FILING DATE: 2002-03-29  
; PRIOR APPLICATION NUMBER: 09/886,400  
; PRIOR FILING DATE: 2001-06-20  
; PRIOR APPLICATION NUMBER: 09/619,032  
; PRIOR FILING DATE: 2000-07-19  
; PRIOR APPLICATION NUMBER: 09/407,806  
; PRIOR FILING DATE: 1999-09-20  
; PRIOR APPLICATION NUMBER: 08/613,220  
; PRIOR FILING DATE: 1996-03-08  
; NUMBER OF SEQ ID NOS: 4  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 4  
; LENGTH: 364  
; TYPE: PRT  
; ORGANISM: Thermococcus alcaliphilus  
US-10-112-418-4

Query Match 99.5%; Score 1870; DB 13; Length 364;  
Best Local Similarity 99.5%; Pred. No. 4.9e-165;  
Matches 362; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 LRALVFHGNLQYAEIPKSEIPKVIKAYIPVETLKEEIPGLNITGYTLKFLPKDIIID 60  
DB 1 LRALVFHGNLQYAEIPKSEIPKVIKAYIPVETLKEEIPGLNITGYTLKFLPKDIIID 60  
QY 61 LVKGIASDLIEITIGTSYTHAILPLPLSRVEAQVORDREVKEELFEVSPKGFMLPELAY 120  
DB 61 LVKGIASDLIEITIGTSYTHAILPLPLSRVEAQVORDREVKEELFEVSPKGFMLPELAY 120  
QY 121 DPIIPAILKONGEYELFADGEAMLFSAHLSAIPKIPLYPHLIKAOREKFRYISYLLG 180  
DB 121 DPIIPAILKONGEYELFADGEAMLFSAHLSAIPKIPLYPHLIKAOREKFRYISYLLG 180  
QY 181 LRELKAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
DB 181 LRELKAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
QY 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
DB 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
QY 301 DKSLRIMREDEGNARLNLNLSYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
DB 301 DKSLRIMREDEGNARLNLNLSYMRGELALLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
QY 361 NGEF 364  
DB 361 NGEF 364

DB 361 NGEF 364

RESULT 10  
US-10-114-083-4  
; Sequence 4, Application US/10114083  
; Publication No. US20020160464A1  
; GENERAL INFORMATION:  
; APPLICANT: DIVERSA CORPORATION  
; APPLICANT: Murphy, Dennis  
; APPLICANT: Ried, John  
; TITLE OF INVENTION: ENZYMES HAVING ALPHA-GALACTOSIDASE ACTIVITY AND  
; FILE REFERENCE: DIVER1120-4  
; CURRENT APPLICATION NUMBER: US/10/114,083  
; PRIOR FILING DATE: 2002-04-01  
; PRIOR APPLICATION NUMBER: 09/886,400  
; PRIOR FILING DATE: 2001-06-20  
; PRIOR APPLICATION NUMBER: 09/619,032  
; PRIOR FILING DATE: 2000-07-19  
; PRIOR APPLICATION NUMBER: 09/407,806  
; PRIOR FILING DATE: 1999-09-20  
; PRIOR APPLICATION NUMBER: 08/613,220  
; PRIOR FILING DATE: 1996-03-08  
; NUMBER OF SEQ ID NOS: 4  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 4  
; LENGTH: 364  
; TYPE: PRT  
; ORGANISM: Thermococcus alcaliphilus  
US-10-114-083-4

Query Match 99.5%; Score 1870; DB 13; Length 364;  
Best Local Similarity 99.5%; Pred. No. 4.9e-165;  
Matches 362; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 LRALVFHGNLQYAEIPKSEIPKVIKAYIPVETLKEEIPGLNITGYTLKFLPKDIIID 60  
DB 1 LRALVFHGNLQYAEIPKSEIPKVIKAYIPVETLKEEIPGLNITGYTLKFLPKDIIID 60  
QY 61 LVKGIASDLIEITIGTSYTHAILPLPLSRVEAQVORDREVKEELFEVSPKGFMLPELAY 120  
DB 61 LVKGIASDLIEITIGTSYTHAILPLPLSRVEAQVORDREVKEELFEVSPKGFMLPELAY 120  
QY 121 DPIIPAILKONGEYELFADGEAMLFSAHLSAIPKIPLYPHLIKAOREKFRYISYLLG 180  
DB 121 DPIIPAILKONGEYELFADGEAMLFSAHLSAIPKIPLYPHLIKAOREKFRYISYLLG 180  
QY 181 LRELKAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
DB 181 LRELKAIKLVFEGKVTLLKAVKDIEAVPVWVAVNTAVMLGIGRLPLMNPCKVASWIEDKD 240  
QY 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
DB 241 NILLYGTDIEFIGYRDIAGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAP 300  
QY 301 DKSLRIMREDEGNARLNLNLSYMRGELAFLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
DB 301 DKSLRIMREDEGNARLNLNLSYMRGELALLAENSDARGWEPLPERRLDAFRAIYNDWRGE 360  
QY 361 NGEF 364  
DB 361 NGEF 364

RESULT 11  
US-10-282-122A-53281  
; Sequence 53281, Application US/10282122A  
; Publication No. US20040029129A1  
; GENERAL INFORMATION:  
; APPLICANT: Wang, Liangsu  
; APPLICANT: Zamudio, Carlos  
; APPLICANT: Malone, Cheryl



```

; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari
; APPLICANT: Zyskind, Judith
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John
; APPLICANT: Carr, Grant
; APPLICANT: Yamamoto, Robert
; APPLICANT: Forsyth, R.
; APPLICANT: Xu, H.
; TITLE OF INVENTION: Identification of Essential Genes in Microorganisms
; FILE REFERENCE: ELITRA.034A
; CURRENT APPLICATION NUMBER: US/10/282,122A
; PRIOR FILING DATE: 2003-02-20
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/230,335
; PRIOR FILING DATE: 2000-09-06
; PRIOR APPLICATION NUMBER: 60/230,347
; PRIOR FILING DATE: 2000-09-09
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/267,636
; PRIOR FILING DATE: 2001-02-09
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 78614
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 53281
;
; LENGTH: 890
;
; TYPE: PRT
; ORGANISM: Clostridium difficile
US-10-282-122A-53281

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	Query Match	5.9%;	Score 111.5;	DB 15;	Length 890;
	Best Local Similarity	23.6%;	Pred. No. 0.49;		
	Matches	72;	Conservative	48;	Mismatches 98; Indels 87; Gaps 16;
QY	53 FLPKDIIDLVKGGIASDLIEITIGTSYTHAILPLPLSRVEAOVQRDEVKEELFEVSPKG	112			
Db	562 FQP-DLIIVAGGGSAMDAGKIMWMEHEPEVDFOILA-----MFMDIRKRKY-VFPK-	612			
QY	113 FWLPRLAYDPPIP-----AII--KONGYEYLFDAGEAMLFSAHLSAIKPIKP	158			
Db	613 --MGEKAYFAAIFTAGTSEVTPEFAVITDQDSGVKYPILADYEIIMPNAIIDADMMEMP	670			
QY	159 LYPHL-----IKAQREKFRFYISYL-----LGLRELRAIKLVFE-----GKVTL	198			
Db	671 --PRLTASGDALTHALEAVYSMLRTEPADGLAL---QAOKIIFEYLLRAYKNGKNDK	724			
QY	199 KAVKDIEAVPVWVAVNTA-----VMLGIGRLPLMN-----P	229			
Db	725 EAREKMAMASTMAGMSFANAFLGICHSIAHKLGAFFHHVHGCVANALLINEVIKENCAEAR	784			
QY	230 KKVASWIEDK--DNILLYGTDIEFIGYRDIAGY--RMSVEGLEVIDELNSELCLPSELK	285			
Db	785 NKGAFSQQRYRPDCIQRYA---EFASFAGIKGSTDOEKVDNLTKAIDELKAKVGLPKTIK	841			
QY	286 HSGRE	290			
Db	842 EAGVE	846			

[illegible]

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RESULT 13
US-10-424-599-175517
; Sequence 175517, Application US/10424599
; Publication No. US20040031072A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa Thomas J
; APPLICANT: Kovalic David K
; APPLICANT: Zhou Yihua
; APPLICANT: Cao Yongwei
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53223)B
; CURRENT APPLICATION NUMBER: US/10/424,599
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 175517
; LENGTH: 573
; TYPE: PRI
; ORGANISM: Glycine max
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT3847_12950C.1.pep
US-10-424-599-175517

Query Match      5.6%; Score 105.5; DB 15; Length 573;
Best Local Similarity 21.3%; Pred. No. 0.95;
Matches 77; Conservative 57; Mismatches 97; Indels 131; Gaps 19;

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RESULT 12  
US-10-369-493-23237

[illegible]

## RESULT 14

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US-10-425-114-55544
; Sequence 55544, Application US/10425114
; Publication NO. US20040034888A1
; GENERAL INFORMATION:
; APPLICANT: Liu, Jindong
; APPLICANT: Zhou, Yihua
; APPLICANT: Kovalic, David K.
; APPLICANT: Screen, Steven E
; APPLICANT: Tabaska, Jack E
; APPLICANT: Cao, Yongwei
; TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
; FILE REFERENCE: 38-21(53313)B
; CURRENT APPLICATION NUMBER: US/10/425,114
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 73128
; SEQ ID NO 55544
; LENGTH: 730
; TYPE: PRT
; ORGANISM: Glycine max
; FEATURE:
; OTHER INFORMATION: Clone ID: UC-GMFLMINSOY109F02_FLI.pep
US-10-425-114-55544

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Query Match	5.6%	Score 105.5;	DB 15;	Length 730;
Best Local Similarity	21.3%	Pred. No. 1.3;		
Matches 77;	Conservative 57;	Mismatches 97;	Indels 131;	Gaps 19;

[illegible]

Db	642	-----LTNPD-----ENÖNNILVAGSRGLYTGTIRDINAIAANS	673
QY	258	--AGYRMSVEGLLEVIDELNSELCLPSELKHSGRELYLRTSSWAPDKSLRTWREDEGNAR	315
Db	674	IAAMGLVLSLGSVSKVDSGVISELC-----ENYGNLEAVKNSN---DSGGGAFLDDEGGSS	725
QY	316	LN 317	
Db	726	LD 727	

## RESULT 15

```

US-09-815-242-12361
; Sequence 12361, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; PRIOR FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12361
; LENGTH: 1073
; TYPE: PRT
; ORGANISM: Staphylococcus aureus
US-09-815-242-12361

```

Query Match	5.5%;	Score 103;	DB 9;	Length 1073;
Best Local Similarity	21.2%;	Pred. No. 4;		
Matches	58;	Conservative	48;	Mismatches 90;
				Indels 78;
				Gaps 15;

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OY      107 EVSPKGFWLPelaydPiIaILKNGEYyLFADGEaMLFSaHLNSaIKPiKPLyPHLiKA 166
         ||::||      ||:      ::||:      |::|      :::|      ||
Db      309 EISP-----YYDSL---LVKUSTHAI$FKOAEK$MVRSLREMRIRGVKTNIP$LLINV 357
OY      167 QREKR$-----RYISyLLG$REL$KAI-----KLVEGKVTLKA$VDIE----- 205
         :::|      ::||      ::||      :::|      |::||      ::||
Db      358 M$NKKFTSGDYTTKPIETPELPEDIQ$SLDRG$TKLEYIGNVTTINGFP$NVEKRPKPDYEL 417
OY      206 -AVP$WVA$VNTAV$MLGIGR-L$LMNP$K$K$V$ASWIEDK$NILLyGTDI$F-IGYRDIAGYRM 262
         ::||      :      |::|      |::|      |::|      |::|      |::|
Db      418 ASIP$TVSS$KIASFS$GTQ$LD$EV$GPK$V$AE$W$VKQ$DDVLL--TD$TFRDAHQ$LLATRV 475
OY      263 SVEGLLEVIDELNS$ELCLP$SELK$G$RELyLRTSSWAP$DK-SL$RIWR$DEGNARL$ML$SY 321
         :::|      :      |::|      |::|      |::|      |::|      |::|
Db      476 RTK$DMINIAS-----KTADVFKDG$F$LEMM-----G$ATFD-VAY 509
OY      322 NMRGELAF$LAENS$DARGWEPLPER$RLDA$FRAIYN 355
         |::|      |::|      |::|      |::|      |::|      |::|

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Db 510 N-----FLKENP-----WERLERLR-----KAIPN 529

Search completed: March 7, 2005, 21:56:19  
Job time : 134 secs

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